Math 232 Spring 2002
Quiz 11 (4/16) Name: _____ 01/02

You have 20 minutes to take this quiz. Each problem will be graded for clarity of work as well as correctness, so show all work **clearly and in order**. Circle or otherwise indicate your final answers. Please note that there are problems on both the front and the back of this page.

1. (*0 points*) The definite integral below represents the arc length of some function $f(x)$ over some interval $[a, b]$. What is this function and this interval?

$$\int_{-2}^{5} \sqrt{1 + 9e^{6x}}\, dx$$

Do NOT try to solve this integral! Put your final answers in the boxes below.

$f(x) =$	$[a, b] =$

2. (*0 points*) Write down a definite integral that describes the volume V of the solid of revolution obtained by taking the region between the graph of $f(x) = x^2$ and the x-axis from $x = 1$ to $x = 2$ and rotating it around the x-axis. Show your work to get partial credit.

Do NOT try to solve the integral! Put your final answer in the box.

$V =$

Turn over for more...

3. (*0 points*) Solve the integral $\int \frac{x^3}{x^2+4}\,dx$. Show your work clearly to get partial credit.